What is claimed is:

1. A structure for reducing the diffraction effect in periodic electrode arrangements, comprising:

a plurality of first electrodes and a plurality of second electrodes, wherein the first electrodes and the second electrodes are periodically disposed and one of the two or both are transparent electrodes;

multiple layers of transparent dielectric layers having different diffraction indexes, formed in predetermined thicknesses among the plurality transparent electrodes, wherein the diffraction index and the thickness of the transparent dielectric layers and the transparent electrodes satisfy the following equation:

$$0.8\ n_{ed}d_{ed} \leqq n_1d_1+n_2d_2+\cdots\cdots+n_xd_x \leqq 1.2\ n_{ed}d_{ed}$$

wherein n_1 is the diffraction index of the first dielectric layer, n_2 is the diffraction index of the second dielectric layer, n_x is the diffraction index of the x^{th} dielectric layer, ned is the diffraction index of the transparent electrode, d_1 is the partial or overall thickness of the first dielectric layer, d_2 is the partial or overall thickness of the second dielectric layer, d_x is the partial or overall thickness of the first dielectric layer, and d_{ed} is the thickness of the transparent electrode.

2. The structure as claimed in claim 1, wherein the transparent dielectric layer is silicon-rich oxide or nitride formed by chemical vapor deposition.

3. The structure as claimed in claim 1, wherein the transparent dielectric layer is titanium dioxide, zinc oxide, Cerium dioxide or zinc sulfide.

4. The structure as claimed in claim 1, wherein the transparent dielectric layer is fluorine-containing glass.

5. The structure as claimed in claim 1, wherein the transparent electrodes are ITO, IZO, AZO or ZnO.

6. The structure as claimed in claim 1, wherein the partial or overall thickness of the dielectric layer is the combined thickness of the dielectric layer and the transparent electrodes.

7. A liquid crystal display device, comprising:

an active matrix substrate;

a second substrate, disposed opposite the active matrix substrate; and

liquid crystal, filled in between the two substrates;

wherein the active matrix substrate comprises:

a pixel comprised of a pixel electrode disposed as a matrix and a common electrode; and

an switching element formed on the liquid crystal side of the first substrate, for controlling the operation of the pixel, above which a

number of signal lines and scanning lines intersect;

wherein one or both of the pixel electrodes and the common electrodes are transparent, and their structure is as claimed in claim 1.

8. The device as claimed in claim 7, wherein the active matrix substrate is a thin film transistor matrix substrate.

9. The device as claimed in claim 7, wherein the liquid crystal display device is a liquid crystal display device in lateral electric field switching mode comprising periodically-disposed electrodes.

10. The device as claimed in claim 7, wherein the liquid crystal display device is a liquid crystal display device in plane switching mode comprising periodically-disposed electrodes.

11. The device as claimed in claim 7, wherein the liquid crystal display device is a liquid crystal display device in fringe-field switching mode comprising periodically-disposed electrodes.

12. The device as claimed in claim 7, wherein the liquid crystal display device is an LCD projector.

13. The device as claimed in claim 7, wherein the liquid crystal display device is a reflective display device.

14. The device as claimed in claim 7, wherein the liquid crystal display device is semi-transparent display device.